

IN THE ABSTRACT

The Abstract has been amended as follows:

~~In a method and a device to localize regions in a biological tissue section, at least during the examination the tissue section exhibits one fluorescence property differing from the tissue section, due to which, given an exposure with light of a first wavelength, light of another wavelength is emitted.~~

[[A]] In a method and device to localize regions in a biological tissue section that exhibit a fluorescence property differing from the tissue section a, sequence of fluorescence-exciting light signals is applied at different locations on the tissue section ~~tissue section is applied~~. Fluorescence light is measured at a number of measurement locations on a surface of the tissue section, which appears there due to the light signals. Frequency-independent signal portions in the response signals are determined and are further processed into input values of a localization step. The tissue section is modeled and a set of guide lead fields is determined. The guide lead fields are transformed that in a localization step the frequency-independent signal portions are compared with the transformed guide lead fields, and the three-dimensional location of the transformed guide lead fields that best reproduce the frequency-independent signal portions is output as the three-dimensional location of the region to be localized.